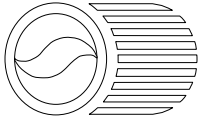


California Environmental Protection Agency



# **Air Resources Board**

## **Low Carbon Fuel Standard**

### ***Crude Oil Screening Workgroup***

***June 16, 2010***

# Agenda

- Welcome and introductions
- Background and objectives
- Proposed revisions to the crude screening process
- Matching marketing crude name to field names
- Life Cycle Assessment of TEOR
  - Presentation by Stefan Unnasch and Adam Brandt
  - Discussion
- Future steps
- Other discussion items?

# Important Definitions

- “included in the 2006 California baseline crude mix” means the crude oil constituted at least 2.0 percent of the 2006 California baseline crude mix, by volume, as shown by California Energy Commission records for 2006.
- “high carbon intensity crude oil” (HCICO) means any crude oil that has a total production and transport carbon intensity value greater than 15 gCO<sub>2</sub>e/MJ.

# Carbon Intensity for CARBOB and Diesel

- Lookup Table carbon intensity values are weighted averages based on the 2006 California baseline crude mix.
- These average CI values are used if crude oil:
  - Is included in the 2006 California baseline mix or
  - Is not a high carbon intensity crude oil
- Crude oil sources not included in the 2006 California baseline mix must be evaluated to determine if they are HCICO.

# Workgroup Objectives

- Recommendations for:
  - At what level to evaluate crude sources
  - Identifying “clearly non-HCICO” sources
- Share technical information and discuss the life cycle assessment of different crude production methods

# Revised Structure for Screening Process: Presented for Discussion

## Concept

1. Non-HCICO Identifiers: Set of conservative considerations to quickly identify clearly non-HCICO sources.
2. Method 2B: Sources not identified as clearly non-HCICO will require a Method 2B application.

# **Draft Non-HCICO Identifiers: For Discussion**

- Apply identifiers on a field-specific basis unless noted.
- Crude sources not identified as clearly non-HCICO go through Method 2B.
- An example of non-HCICO identifiers:
  - Crude oil produced by means other than enhanced oil recovery or crude bitumen mining.
  - Gas flaring at a rate less than \_\_\_\_ scf/bbl as determined using NOAA/NGDC Global Gas Flaring Estimates.
  - An indicator for low production intensity such as field depth, field depth and water to oil ratio, or field depth and field age.
- Non-HCICO identifiers may evolve over time as the result of knowledge gained through research and experience.

## **Issue: Crude Marketing Name ↔ Crude Field**

- Crude oil is purchased by marketing name but the screening process requires field specific data. Crude marketing names must be matched to crude fields.
- Brief update by Gordon Schremp: California Energy Commission



# **Invited Participation by Stakeholders**

Stakeholders who possess data or have conducted analyses that are relevant to the screening process (and especially the identifiers to be used in the process) are invited to submit these materials to ARB and present at future meetings of the workgroup. This is intended to be a very open process and we welcome your technical input.

# **Thermal Enhanced Oil Recovery**

Presentation by Stefan Unnasch  
(Life Cycle Associates) and Adam  
Brandt (Stanford University)

# **Future Steps**

**Other Discussion Items?**

# Contact Information

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